

Work Order ID 165840

Thursday, August 31, 2017 10:14:46 AM

165840

Ship Sept 11

Page 1

Item ID: D4095-043 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Wearplate Aft
Start Date: 8/31/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 9/11/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: DAS 21 Date: AUG 31 2017 Tooling: _____ Date: _____ Run Start ***NR1***
QC: 9-89 Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D4095	D								
100	FLOW WATER JET	0.01							
100									
Waterjet	Memo	0.59							
FLOW CNC Waterjet	1-Cut as per Dwg (D4095-3) Dwg Rev: <u>D</u> Prog Rev: <u>D</u> 2-Deburr if necessary								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							
110									
QC	Memo	0.04							
Quality Control									
120	QC8- Inspect parts - second check	0.00							
120									
QC	Memo	0.08							
Quality Control									

(4) _____ ac 17/08/31

(4) _____ ac 17/08/31

(4) 17-09-05 DAS 9 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : ☐					

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* Brake NC	Form as per dwg NC BRAKE	0.43							
Brake NC	Memo 1- Form on Brake as per Dwg D4095 using Jigs DT 8179 and DT 8155 2- Bend section C-C first 3- Form Joggles (2) as per Dwg D4095 on brake using Jig DT 8157	0.43			DAS 30 9-89	(4)			SEP 07 2017
140 *140* QC	QC5- Inspect part completeness to step on W/O	0.00							
Quality Control	Memo Ensure joggle as per dwg D4095	0.08				(5)	17-09-07		AD
150 *150* autoweld 1	Weld per dwg & QSI004 4.5 Large Fab	0.00							
Automated Welding 1	Memo ***SEE NOTE 8 FOR SURFACE BUILDUP*** 1- WELD AS PER DWG AND QSI004 4.5 FOR AUTOMATED WELDING USE 8259 HARDCOAT BATCH: <u>M138320</u>	1.82				4	2.4	17-09-11	

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 *160* QC Quality Control	QC10- Inspect visual per QSI004- ground welds Memo	0.00 0.08				4		SEP 13 2017	DAS 24 9-89
170 *170* QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.08				4		SEP 13 2017	DAS 24 9-89
180 *180* HandFinish Hand Finishing	Memo COAT ENTIRE TOP (CONCAVE) SURFACE WITH ROCKGUARD AS PER DWG A/R ROCKGUARD BATCH: <u>138351</u>	0.00 0.16				4		SEP 14 2017	DAS 41 9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190 *190* QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.04				4	Ø	SEP 15 2017	DAS 9 9-89
200 *200* Packaging Packaging	Identify as per dwg & Stock Location: <u>FP002</u> Memo LOCATION : FP002	0.00 0.04				(x4)	Ø	2017/09/15	BEB
210 *210* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.40						17/9/19	DAS 21 9-89 SEP 15 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

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Picklist Print

Thursday, August 31, 2017 10:14:50 AM

Page 1

Work Order ID: 165840

165840

Parent Item: D4095-043

D4095-043

Parent Item Name: Wearplate Aft

Start Date: 8/31/2017

Required Date: 9/11/2017

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A new issue DD 10.04.26 verified by:EC
15.10.29 AUTOMATED WELDING DD VERF:JLM

IPP REV:B

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S16GA		Purchased	No			100	sf	107.9000	2.275	9.578947			
M304S16GA									**				
304/316 Sheet .063													

Location

MAT010

m138175

m138346

Loc Qty

107.9

43.9

64

Loc Code

9

17-9-15

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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DART AEROSPACE LTD		Work Order:	165846
Description: Wearplate		Part Number:	D4095-043
Inspection Dwg: D4095 Rev: D		Page 1 of 1	

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.19	+0.005/-0.001	0.192	1		V. 0.02	
2.43	+/-0.030	2.43	1		Top	
2.50	+/-0.030	2.50	1			
3.227	+/-0.010		1			
4.21	+/-0.030	4.21	1			
4.98	+/-0.030	4.98	1			
6.00	+/-0.030	6.00	1			
8.43	+/-0.030	8.43	1			
12.10	+/-0.030	12.10	1			
19.25	+/-0.030	19.25	1			
22.75	+/-0.030	22.75	1			
30.00	+/-0.030	30.00	1			
36.00	+/-0.030	36.00	1			
38.87	+/-0.030	38.87	1			
9.0	+/-0.100	9.0	1			
20.5	+/-0.100	20.5	1			
26.8	+/-0.100	26.8	1			
0.063	+/-0.010	0.058	1			
0.300	+/-0.010		1			
0.300	+/-0.010		1			
0.395	+/-0.010		1			
0.395	+/-0.010		1			

Measured by:	DL	Checked by:	DAS	QC Inspector:	
Date:	17/08/31	Date:	17-08-05	Date:	

Engineering Approval: (If necessary)		Date:	
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Rev	Date	Change	Revised by	Approved
A	16.02.19	New Issue	KJ	
B	17.07.13	Dimensions updated per Dwg Rev D	KJ	

DQA: _____ Date: _____

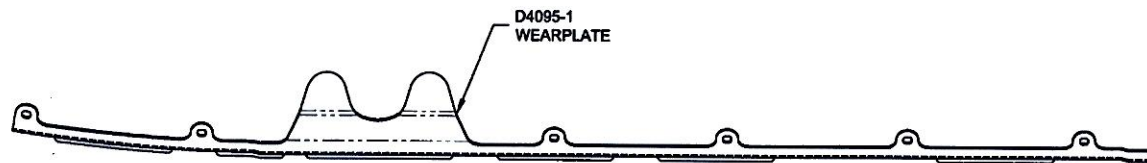


WORK ORDER NON-CONFORMANCE / UPDATE

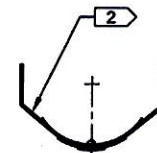
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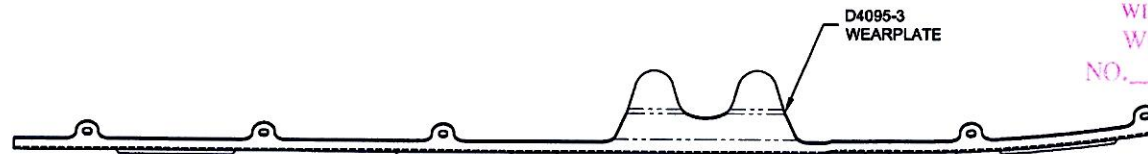
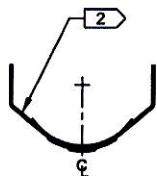
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																			
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OTHER : _____																																																																							



D4095-041 WEARPLATE ASSEMBLY



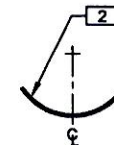
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 165820.MJS
120831



D4095-043 WEARPLATE ASSEMBLY



D4095-045 WEARPLATE ASSEMBLY



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MFG. APPR.	DD	D4095	SHEET 2 OF 9
APPROVED	WM	TITLE	SCALE
DE APPR.	#	WEARPLATE	NTS
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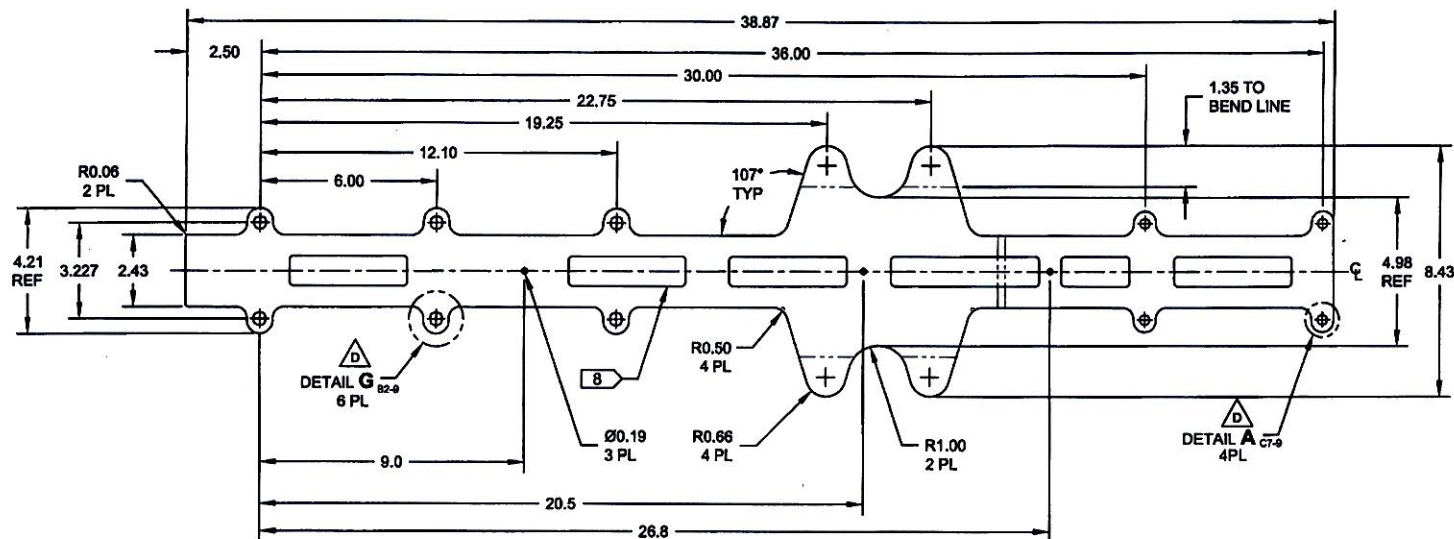


WORK ORDER NON-CONFORMANCE / UPDATE

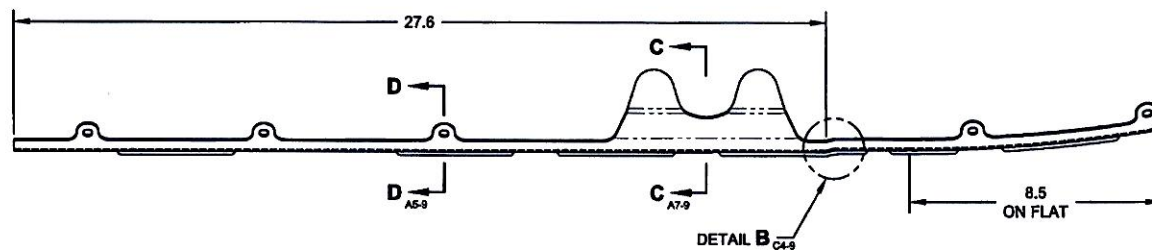
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					



D4095-3F FLAT PATTERN 1



D4095-3 BENDING DETAIL
(MAKE FROM D4095-3F)

D4095-3 NOTES:

- 1) MATERIAL: AISI 304/316 SS SHEET ANNEALED 2B FINISH, 16 GAUGE (0.063 THICK)
PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316), OR ASTM A240 OR ASME SA240
REF DART MATERIAL SPEC M304S16GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: N/A
- 8) WELDING: BUILDUP HARD SURFACING 0.17 TO 0.20 THICK USING 8259 ROD PER QSI 004 SECTION 4.5 (AUTOMATED WELDING) OR
BUILDUP HARD SURFACING 0.17 TO 0.20 THICK USING 2059B ROD PER QSI 004 SECTION 4.1 (MANUAL WELDING)
- 9) PARTS ARE SYMMETRIC ABOUT CENTERLINE

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APPROVED	WM	TITLE	SCALE
DE APPR.		WEARPLATE	NTS
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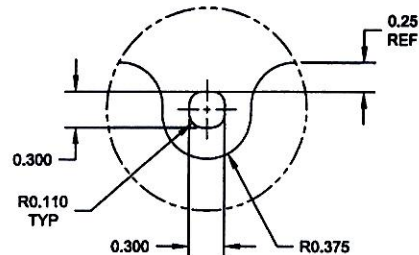


WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

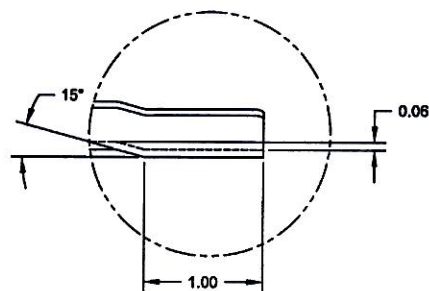
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Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
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Root Cause		FAULT CATEGORY			
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OTHER : ☐					



DETAIL A: TAB DETAIL

SCALE 4X

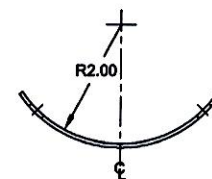
C3-4
C2-5
C6-7
D2-6



DETAIL B: JOGGLE DETAIL

SCALE 4X

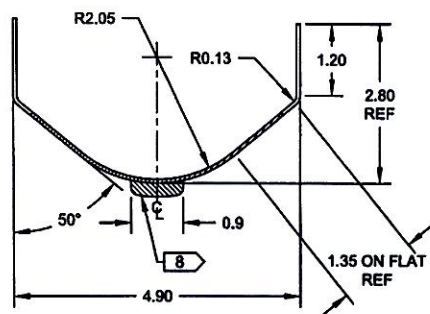
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B3-5
B2-7



SECTION E-E

SCALE 2X

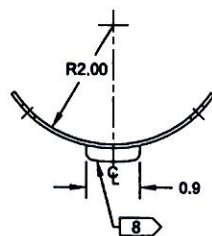
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SECTION C-C

SCALE 2X

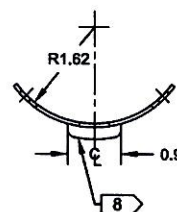
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B4-5



SECTION D-D

SCALE 2X

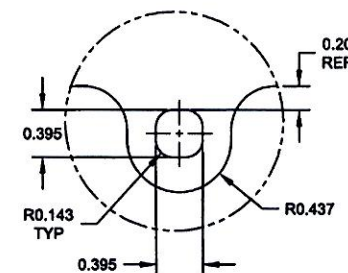
B4-4
B5-5



SECTION F-F

SCALE 2X

B5-6
B7-6



DETAIL G: TAB DETAIL

SCALE 4X

C6-5
C4-7

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WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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																								OTHER : _____																																							